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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,649	11/10/2004	Jens Kloppenborg Moller	IPB-PT002	2985
3624	7590	07/20/2007	EXAMINER	
VOLPE AND KOENIG, P.C.			KIM, SUN U	
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PHILADELPHIA, PA 19103			1723	
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			07/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/500,649	<b>Applicant(s)</b> MOLLER, JENS KLOPPENBORG	
	<b>Examiner</b> John Kim	<b>Art Unit</b> 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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1. Applicant's election of Group I (claims 1-10) in the reply filed on 7/12/07 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claim 11 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was treated as **without** traverse as noted above in the reply filed on 7/12/07.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the concentrate spacers protruding from the separating membranes (see claim 5) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the concentrate spacer protruding to the separating membranes as described in the specification (see page 18, lines 12-13). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The disclosure is objected to because of the following informalities: "that" following after "higher" on line 6 of page 12 of the specification should be corrected to "than".

Appropriate correction is required.

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6. Claim 3 is objected to because of the following informalities: "that" following after "lower" on line 3 should be corrected to "than". Appropriate correction is required.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite for failing to particularly point out what is meant by that the space between the wound filter element and the pressure vessel is "free". Is the space of free of obstruction or just an open space? Furthermore, claim 1 is confusing as to what is considered "the space" after the respective wound filter element. Recitation of "the retentate channels" in claim 1 lacks a positive antecedent basis.

Recitations of "the means for securing that the pressure at the inlet of the filter element ... at the same longitudinal position" and "the spiral wound filter element" in claim 3 lack a positive antecedent basis.

Claims 6-10 provides for the use of a filter assembly, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 10 depends on itself. For examination purposes, claim 10 depends on claim 6.

9. Claims 6-10 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a

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process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

11. Claims 1-2 and 5-10 are rejected under 35 U.S.C. 102(e) as being anticipated by WO '529 (WO 02/051529 A1).

Regarding claims 1-2, WO '529 teaches a filter assembly comprising in a pressure vessel (1) one or more filter elements (2, 3, 4) with anti-telescoping devices (ATD) (19, 20, 21) located upstreams and downstreams for each filter element wherein the spiral wound filter elements (2,

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3, 4) comprises one or more conventionally known type membranes wherein the inlet to the space (49) between the wound filter element and the pressure vessel is free of obstruction and the outlet from said space is restricted by the lip seal (39) so that no flow or only a limited flow is allowed from said space to the space after the respective wound filter element (see figures 1-2; page 1, lines 3-14; page 2, line 19 – page 3, line 15; page 4, line 4 – page 7, line 4).

Conventionally spiral wound membrane types has a central permeate spacer (156) covered on both sides by separating membranes (154, 155), connected at one edge with a permeate pipe (153) and blocked at the three other edges, wound around a central permeate pipe (153) with a concentrate spacer (157) allowing fluid from the space between the wound filter element (160) and the pressure vessel (166) to flow into the wound filter element in a direction tangential to the cross-section of the filter element, so that a membrane unit of membranes (160) and concentrate spacers (157) are lying alternating in the wound element (see figures 20-21; col. 1, line 10 – col. 2, line 7) as evidenced by Fujiwara et al (US Patent No. 6,224,767 B1).

The claim limitation is being treated under 35 U.S.C. 112, sixth paragraph wherein a means for securing that the pressure inside the retentate channels of the filter element is equal to or lower than the pressure in the space between the filter element and the pressure vessel at the same longitudinal position over the whole length of the element is described in the specification (see page 12, line 13 – page 17, line 4) including a corresponding structure of “an element that when placed in the cylindrical pressure vessel secures that concentrate coming from the inlet or the preceding filter element can not or only in a limited extend pass the ATD at a distance from the central permeate pipe longer than  $d$ , where  $d$  is smaller than the diameter of the spiral wound membrane filter elements” (see page 14, lines 20-36) or holes in the sealing (see page 12, lines

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34-37). The lip seal (39) at the outlet side of wound filter element (4) in a space (51) of WO '529 meets the corresponding structures and equivalents thereof in above means limitation wherein the pressure prevailing inside the space on the outer side of each filter element is equalized along the entire length of the filter element with the result that the efficiency of the filter assembly is increased and the telescoping minimized (see WO '529: page 3, lines 5-8). Furthermore, ATD has a ring (31) abutting to the outlet side of the wound filter element (see figure 2).

Regarding claim 5, Fujiwara et al teach that the concentrate spacer (157) protrude from the separating membranes (154, 155) (see figure 20).

Regarding claims 6-8, the apparatus of WO '592 inherently performs the claimed process resulting in claimed pressure differences since WO '592 is the same as a device described in the specification. See *In re King*, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986); MPEP 2112.01.

Regarding claims 9-10, WO '592 teaches that the filter assembly is used within the dairy, the medicine and the food stuff industry which inherently filters an aqueous solution and milk or whey or a fermentation broth (see page 2, lines 11-12).

12. Claims 3-4 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No. 5,985,146 teaches a filter element having a grooved space between pressure vessel and the filter element.




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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kim whose telephone number is 571-272-1142. The examiner can normally be reached on Monday-Friday 7 a.m. - 3:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**John Kim**  
**Primary Examiner**  
**Art Unit 1723**

JK  
7/19/07